The specific gravity of the spring-felled alburnum was 0·666; that of the winter-felled, 0·565. Equal blocks of each alburnum were cleaved into thin pieces; and, when perfectly dry, suspended in a damp room for ten days. One thousand grains of the alburnum of the spring-felled tree gained 162 grains, and of the winter-felled 145; so that there is an obvious difference in the properties of the two; and Mr. Knight doubts not, by taking the bark off in the spring, and not felling the tree till winter, that the timber would be materially improved. He also thinks that these observations are applicable to the heart wood as well as to the alburnum, though he has not at present any very conclusive evidence to offer on that subject.

On the Mode of Formation of the Canal for containing the Spinal Marrow, and on the Form of the Fins (if they deserve that name) of the Proteo-Saurus. By Sir Everard Home, *Bart. V.P.R.S.* Read May 4, 1820. [*Phil. Trans.* 1820, *p.* 159.]

The structure of the vertebræ of the Proteo-saurus is intermediate between that of the lizard tribe and cartilaginous fishes, and they have so close a resemblance to the vertebræ of the shark, as often to have been mistaken for them. They are composed of bone, and have a body and canal for the spinal marrow, and a process for the attachment of muscles; but the body is made up of one piece, while the spinal process, and two lateral branches which belong to it, are made up of another; between these there is no union but a species of joint peculiar to themselves; the hole in the middle thus formed appears unusually small.

In the specimen from which the above description is taken, there is also a fore foot, paddle, or fin,—for it is difficult to say which it should be called,—and which, though not quite perfect, is more so than in any other extant specimen. It presents nothing like the thumb or claw for laying hold, which distinguishes the animals that occasionally inhabit the sea, and come ashore to lay eggs or deposit young. If it be called a fin, it is to be understood as made up of bony materials, the joints of which are extremely numerous, so that it may possibly perform the same office.

An illustrative drawing accompanies this paper.

Some Experiments on the Fungi which constitute the Colouring Matter of the Red Snow discovered in Baffin's Bay. By Francis Bauer, *Esq. F.L.S. In a Letter addressed to the Right Hon. Sir* Joseph Banks, *Bart. G.C.B. P.R.S. &c. &c.* Read May 11, 1820. [*Phil. Trans.* 1820, *p.* 165.]

To ascertain whether the fungi mentioned in the title of this paper vegetate in the snow, Mr. Bauer put a small portion of them into a phial filled with compressed snow, and placed in the open air in a N.W. aspect. In fifty-two hours they had formed a red sediment; and the snow being thawed the water was poured off, and a fresh